Table 1. TCE Concentrations in Grenada MFG Monitoring Wells Progress Toward Cleanup (Pre-2016)

TCE Trends observed in monitoring wells :	43	SEE locations for most wells on 2015 Moose Lodge Road Area Additional Investigation Report PDF p.64/2563
TCE Trends increasing in monitoring wells :	23	**Almost 53% of wells have increasing TCE trend after years of sampling. Degradation rates are less than the input rates where TCE is increasing. Effective degradation rate is slower as slope increases. Positive slope shows increasing concentration.**

Well Name	TCE Trend	TCE @ MCL before 2048	TCE Trend Slope	Comment 1	Comment 2	Comment 3
MW01	Decreasing	Yes	-0.1711	TCE cleanup to MCL around 2036 from 7,700ug/L. Well is too shallow. See TW-215 MRL 2015 Report PDF p.96/2563.	This well is between Equalization Lagoon & WWTP, north of ball field. TCE trend deceasing fairly fast.	Well not sampled since 2012!
MW02	Increasing	No	0.0203			Well not sampled since 1998!
MW03	Decreasing	Yes	-0.1280	TCE cleanup to MCL around 2033.		
MW04	Decreasing	No	-0.0055	TCE cleanup to MCLs after 2100. Very long TCE cleanup time far greater than 100 years.	Slight decreasing trend more likely evidence of movement than degradation.	Highly contaminated well not sampled since 2012!
MW05	Increasing	No	0.0137	TCE cleanup to MCLs after 2100. Very long TCE cleanup time far greater than 100 years.	Slight decreasing trend more likely evidence of movement than degradation.	Deep Well in MW05/10 pair.
MW06	Decreasing	No	-0.0872	TCE cleanup to MCL around 2074 from 9,800ug/L.		Well not sampled since 2012!
MW07	Increasing	No	0.0202	Erratic trend from low concentration.	Why is TCE increasing up gradient & away from Main Plant Building?	
MW08	Decreasing	Yes	-0.0748	TCE cleanup to MCL around 2047 from 420ug/L.	Slow cleanup from low concentration (420ug/L). Slow rate may be due to downward TCE movement from MW11 or from up gradient?	
MW09	Stable Not Contaminated					Deep Well in MW09/12 pair.
MW10	Increasing	No	0.0640			Shallow Well in MW05/10 pair.
MW11	Decreasing	Yes	-0.1680	Predicted in 2012 well should be clean by 2015 based on trend to 2012. In 2015 well produced one 1U result.	Expect some low-level variabilty based on 2013 result.	

MW12	Decreasing	Yes	-0.2096	Predicted in 2012 well should be clean by 2015 based on trend to 2012. By 2015 well produced three 1U results in a row.		Shallow well in MW09/12 pair
MW13	Increasing	No	0.2408	North of Outfall Ditch. Increase due to northerly by-pass of PRB?	2003 sample was ND. Increase likely due to PRB, but possibly Eastern Heights neighborhood plume.	
MW14	Increasing	No	0.0282	Example of a PRB failure! Decrease after PRB installed rises again to <1,000µg/L in 3 years.	Well DG from PRB should be clean 10 years after PRB installation but isn't. Trend is highly erratic and unlike other wells.	Shallow well of MW14/57 pair.
MW15	Decreasing	No	-0.1054	TCE cleanup to MCL around 2058 from 5,200ug/L.		Well not sampled since 2012!
MW16	Decreasing	No	-0.1058	TCE cleanup to MCL around 2062 from 7,100ug/L.	Decreasing trend here may show PRB responsible for increases in wells farther down gradient?	Will concentrations rise in next few years upsetting a downward trend?
MW17	Decreasing	No	-0.0851	TCE cleanup to MCL around 2088 from 13,000ug/L.		Well not sampled since 2012!
MW19				Never Sampled		
MW20	Increasing	No	0.1166		Eastern Heights subdivison boundary well.	Well not sampled since 2014!
MW21				Insufficient Samples. Well should be sampled. Other area wells increasing.	Sampled only twice in 1993 with one MCL exceedance for TCE.	Well not sampled since 1993!
MW22				Never Sampled		
MW23	Decreasing	No	-0.0098	TCE cleanup to MCLs after 2100. Very long TCE cleanup time far greater than 100 years.		
MW24				Insufficient Samples	Highly contaminated well at AOC A sampled only twice in 1993 with two high MCL exceedances for TCE > 4,400 ug/L at AOC A Fuel Tank Containment Area.	
MW25	Decreasing	No	-0.1261	TCE cleanup to MCL around 2080 from 360,000ug/L.	Well only 22 feet deep. Have no data below this interval.	
MW26				MLR well sampled 1993 & 1999. See MLR (Grenada) 2015 report PDF p.167/2563. TCE >63000µg/L.	No digital data yet.	
MW27				Never Sampled	Well at AOC A with no reported sample results!	
MW28				Never Sampled	Well at AOC A with no reported sample results!	

MW29				Never Sampled	Well at AOC A with no reported sample results!	
MW30				Never Sampled	Well at AOC A with no reported sample results!	
MW31				Never Sampled	Well at AOC A with no reported sample results!	
MW32				MLR area well	No digital data yet.	
MW41	Increasing	No	0.1606	Erratic Trend. See MW14.	DG from PRB so results dependent on PRB performance. Significant increase in TCE after 2012.	
MW42	Decreasing	Yes?	-0.1142	Erratic Trend. See MW14.	DG from PRB so results dependent on PRB performance, which is failing. Low results for 5 years after PRB install are being offset by higher results.	Trend is changing.
MW43	Increasing	No	0.3302		Inside the PRB so results dependent on PRB performance.	
MW44	Increasing	No	0.1394		Inside the PRB so results dependent on PRB performance.	
MW45	Increasing	No	0.0079	Mean TCE concentration >12,500ug/L with little variation since 2003.		
MW46	Decreasing	No	-0.0662	TCE cleanup to MCL around 2117 from 15,000ug/L.	Overall trend down but recent increase evident.	
MW47	Increasing		0.1314	Increasing from low levels. Indication of PRB failure?	DG from PRB so results dependent on PRB performance	Shallow well of MW47/48 pair.
MW48	Increasing	No	0.6228	Example of a PRB failure! Decrease after PRB installed rises again to <1,000µg/L in 6 years. See MW14.	DG from PRB so results dependent on PRB performance	Deep well of MW47/48 pair.
MW49	Decreasing	Yes	-0.0232	TCE trend is a bit erratic. PRB appears to be failing.	Inside the PRB so results dependent on PRB performance.	Deep well in MW49/50 pair inside PRB.
MW50	Increasing	No	0.2444	TCE trend is a bit erratic. PRB appears to be failing.	Inside the PRB so results dependent on PRB performance.	Shallow well in MW49/50 pair inside PRB.
MW51	Increasing	No	0.4715		Up gradient from PRB increasing dramatically since PRB installation.	Shallow well of MW51/52 pair.
MW52	Increasing	No	0.2344	Damming effect by PRB since 2005?	Up gradient from PRB increasing dramatically since PRB installation.	Deep well of MW51/52 pair.
MW53	Increasing	No	0.3898		Up gradient from PRB increasing dramatically since PRB installation.	
MW54	Increasing	No	0.3880	Damming effect by PRB since 2005?	Up gradient from PRB increasing dramatically since PRB installation.	

MW55	Increasing		0.0034	PRB South end	Steady TCE concentrations ~2,000µg/L.	Shallow well of MW55/56 pair.
MW56	Increasing		0.1750	PRB South end	TCE concentrations ~2,000µg/L.	Deep well of MW55/56 pair.
MW57	Decreasing		-0.6490	Middle & DG from PRB very different performance from MW14.	Why is PRB working here and not in shallow well MW14?	Deep well of MW14/57 pair.
MW58	Increasing		0.8135	PRB North end	Concentrations increasing toward 100µg/L.	Shallow well of MW58/59 pair.
MW59	Increasing		0.2208	PRB North end	Concentrations < MCL but TCE concentrations increasing.	Deep well of MW58/59 pair.
MW60				Insufficient Samples		
MW61				Insufficient Samples		
MW62				Insufficient Samples		
MW63				Insufficient Samples		
RT01	Increasing	No	0.0207	Well is UG from Equalization Pond area. TCE typically 100-200 µg/L.	Is TCE increase due to vertical migration from unsaturated soils or lateral migration from Up Gradient?	RT wells are too shallow. See TW-215 MRL 2015 Report PDF p.96/2563. Decreasing trends may be partially from sinking plume.
RT02	Decreasing	No	-0.1262	TCE cleanup to MCL around 2069 from 63,000ug/L, much higher than RT-1.	RT02 & RT03 have almost identical degradation rates. Initial concentrations are so high cleanup is far in future despite reasonable degradation rate.	See well TW-209 in MLR 2015 report PDF p.96/2563.
RT03	Decreasing	No	-0.1043	TCE cleanup to MCL around 2087 from 130,000ug/L.	Interesting RT02 & RT03 have almost identical degradation rates. Initial concentrations are so high cleanup is far in future despite reasonable degradation rate.	Well not sampled since 2012!
RT04	Decreasing	No	-0.0470	TCE cleanup to MCLs around 2095.		RT wells are too shallow. See TW-215 MRL 2015 Report PDF p.96/2563. Decreasing trends may be partially from sinking plume.
RT05	Decreasing	Yes	-0.1522	TCE cleanup to MCL around 2042 from 10,000ug/L.		